

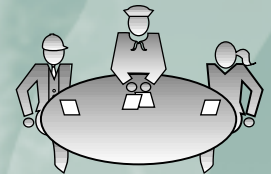


CHAPTER 2

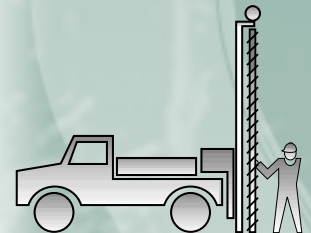
SMART Cleanup Goals, Policies, Programs and Workgroups

The DON has established specialized environmental policies, programs and workgroups to handle diverse environmental cleanup issues. Over the past year, the Navy has been proactive in establishing new policies and developing workgroups to meet our objective of cleaning up sites faster, smarter, and better while being protective and cost efficient. Under SMART Goals, the Navy has focused its program to move towards site closeout. The Navy has also focused the BRAC program to speed up cleanup and transfer property. Under SMART Policies, the Navy has issued policies in Ecological Risk Assessment and Land Use Controls, and worked with other Department of Defense agencies to develop procedures for site closeout. Under SMART Programs, the Navy has formed the Ecological Risk Technical Assistance Team (ERTAT), to address ecological concerns at installations, and refocused other programs. Under SMART Workgroups, the Long Term Management/ Remedial Action Operations Workgroup; Bioavailability Workgroup; and Ecological Risk Assessment Workgroup have been instituted to clarify the issues at different Engineering Field Divisions and Activities.

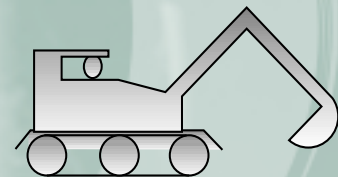
SMART Policies, Programs, and Workgroups have concentrated elements and efforts in the Environmental Restoration Program. These initiatives can work together in numerous ways, permitting cleanup efforts to be customized for each situation. The end result is a consistent yet versatile approach to site restoration, allowing for rapid completion of tasks and avoiding duplication of administrative effort. The following pages describe some of these systems and explain their roles in the cleanup process.



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SMART Cleanup Goals

After more than a decade of effort and billions of dollars in expenditures, the DON's environmental cleanup program is moving toward site closeout at the majority of installations and sites. The program initially focused on the following areas:

1. Site Identification: locating the sites that require cleanup
2. Analysis and Remedy Selection: deciding how to handle cleanup at the sites
3. Risk-Based Prioritization: determining which sites to clean up first
4. Remediation Design and Construction: beginning the actual cleanup process

Today, the Navy's progress can be measured by the number of remedies in place (RIP) and the number of sites categorized as response complete (RC), indicating that sites are reaching the last milestone in the often lengthy cleanup process.

The DON Cleanup Policy

Congress's development of the Defense Environmental Restoration Program (DERP) has increased management attention to cleanup programs at all levels of the Navy. The DON has developed a number of goals for implementation of our cleanup efforts.

- Involve the community
- Eliminate threats immediately
- Commit to action and expedite cleanup
- Use risk management approach to prioritize site cleanup
- Consider future land use
- Partner with involved agencies
- Comply with all regulations

Risk Management

The Department of Defense uses a new prioritization scheme based on the relative risk of sites. Relative risk considers the relationship between contaminants, the pathways contaminants may travel, and the humans, animals and plants that can be adversely affected. Sites are grouped in categories of high, medium, and low risk so we can establish priorities. Since we cannot reasonably and financially do everything at once, relative risk is used to identify sites that pose a greater health risk for first action. While we give priority to "high" category sites, we remain flexible enough to clean up medium and even low category sites when it makes sense to do so. For example, it may make better business sense to have the cleanup contractor remediate a low risk site at the same time as an adjacent high risk site, rather than bringing back the contractor years later for the low risk site.

More Cleanup, Less Study

We continue to spend a larger portion of our Environmental Restoration, Navy (ER,N) budget on actual cleanup. We accomplished this through early identification of cleanup sites, wise use of our cleanup contracts, and the support of regulators and the community. However, studies remain an integral part of the cleanup process, helping us to understand the types, locations, severity and geophysical characteristics of contaminants before deciding what actions to take, if any. After careful analysis, we proceed to active remediation only where protection of human health and the environment require it. The goal is to make intelligent decisions for safe site closeout.

Technology Innovation

The DON actively encourages the development of new environmental technologies. These initiatives support our business approach to cleanup by allowing us to meeting environmental standards faster and at lower cost, while maintaining our commitment to preserving human health and the environment. Refer to page 3-6 for a sampling of new Navy-funded technologies.



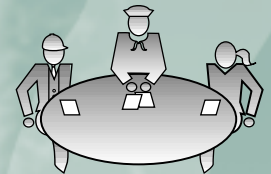
BRAC Environmental Program

The DON strategy for Base Realignment and Closure (BRAC) sites focuses on achieving operational closure at each selected site as quickly as possible. The military mission at the closure site will cease, and all mission equipment and personnel, with the exception of a small caretaker staff, will be disbanded or relocated. The DON then seeks to fast-track cleanup and transfer of the BRAC property in order to support local communities in their redevelopment efforts. The DON is implementing four rounds of BRAC closure as directed by law. The first was in 1988 under the Defense Base Closure and Realignment Act of 1988 (Public Law 100-526). Three additional rounds followed in 1991, 1993, and 1995 under the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510). As a result of these decisions, the DON is implementing a total of 178 actions consisting of 46 major closures, 89 minor closures and 43 realignments.

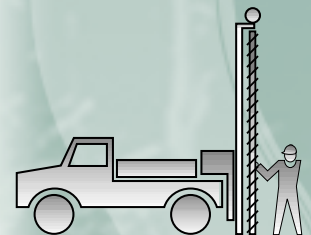
Community Revitalization Plan

Rapid operational closure also provides affected communities with early opportunities for economic redevelopment. Effective community involvement and planning are central to the conversion and redevelopment of DON bases and the retention of a skilled labor force in base closure communities. These efforts are guided by the Administration's Plan for Revitalizing Base Closure Communities as follows:

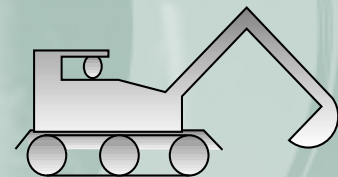
- Job-centered property disposal as economic incentive
- Fast-track environmental cleanup to facilitate reuse
- Base transition coordinators to reduce red tape
- Ready access to redevelopment assistance
- Larger redevelopment planning grants



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Supporting Economic Redevelopment

In implementing BRAC closures, we want to convey property to communities quickly to advance their economic recovery by ensuring that the property is safe for its intended use. We are also required by law to consider the impact of property disposal on wetlands, coastal areas, endangered species, and archeological/historic sites. A final, approved reuse plan from the Local Redevelopment Authority (LRA) is critical to the process.

“Finding of Suitability” Documentation

The DON can provide interim leases of base closure property to promote redevelopment. The first step in this process is the preparation of a Finding of Suitability to Lease (FOSL). To accelerate this process, DON is working with LRAs to identify the most attractive leasing prospects and prepare the documentation ahead of time. We also prepare the required “Finding of Suitability to Transfer” (FOST) as soon as the property is environmentally suitable to convey title. Cleanup in Progress

Some communities have expressed concern about the pace at which the DON is able to clean up contamination on closing bases. The Navy and Marine Corps have occupied these bases for 50 to 100 years or more, and many are industrial areas. Disposal methods that were acceptable in the past for both military and private industry are no longer practiced because of the environmental contamination they leave behind. However, environmental problems that pose an imminent risk to human health are rare. These problems are given immediate priority in our cleanup efforts. Cleanup associated with BRAC bases will be both time-consuming and expensive—an estimated cost of \$1.2 billion. The DON goal is to have all BRAC sites cleaned up and available for transfer by the end of fiscal year 2005.

Active Efforts

The DON created BRAC cleanup teams comprised of Navy/Marine Corps personnel and environmental regulators to assess, prioritize, and perform necessary cleanup quickly. Through cooperative efforts with communities and regulators, we work to establish cleanup standards that match the nature of the planned reuse. This makes cleanup faster, saves money, and still protects human health and the environment. Detachments of former shipyard workers are trained to do cleanup work, providing local jobs and new skills for these hard-working professionals. Local and national contracting authority is also put into place to perform the work.

Reuse and Funding Considerations

Even with these initiatives in place, budget constraints limit our ability to complete cleanups that do not pose an imminent threat but still must be performed before the property can be conveyed. As a result, our goal is to use cleanup dollars for those sites that have the most immediate prospects for reuse.

Sites with approved reuse plans will therefore get top priority for cleanup funds. We are also working with EPA and state regulators to use the new section 334 amendments to CERCLA, which permit the transfer of property before cleanup is completed unless such a conveyance would impact human health or the environment.

A Business Approach to Cleanup

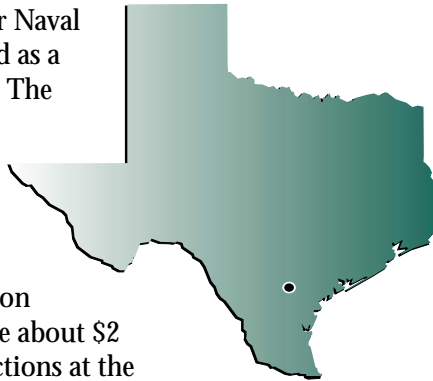
Our nation needs a strong Navy and Marine Corps and a protected environment. While it is imperative that we comply with environmental standards, we have the responsibility to do so in a businesslike manner. We will continue to identify, evaluate, and select the most cost-effective methods for establishing cleanup goals, tracking progress, setting benchmarks, and achieving results.



BRAC Success: Cleanup Complete!

Innovative Design Leads to Early BRAC Transfer NAS Chase Field, SOUTHDIV

Located near Beesville, Texas, former Naval Air Station (NAS) Chase Field served as a pilot training center since the 1940s. The base was slated for closure in 1991 as part of the Base Realignment and Closure Act (BRAC II), and was decommissioned in 1993. Through innovations in design and remediation technology, the Navy was able to save about \$2 million and complete all remedial actions at the base four months early.



RCRA Assessment

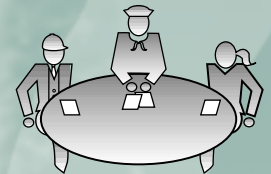
EPA Region VI conducted a Resource Conservation and Recovery Act (RCRA) Facility Assessment at the base and identified 112 Solid Waste Management Units (SWMUs) that required closure before the property could be transferred. Closure was obtained for all of the SWMUs under Texas Risk Reduction Rules.

Early Partnering

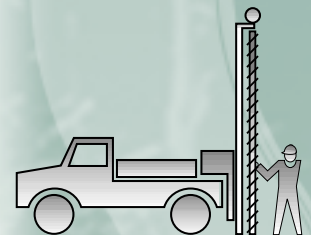
This project began prior to the formal establishment of BRAC Cleanup Teams (BCTs) and Restoration Advisory Boards (RABs) for Navy IR projects. SOUTHDIV organized an Environmental Advisory Committee comprised of representatives of SOUTHDIV, NAS Chase Field, Texas Natural Resources Conservation Commission (TNRCC), EPA Region VI, the Texas Office of the Attorney General, contractors, and the local community. The group met regularly and expedited the closure effort by making consensus decisions. In addition, public meetings were held to present site plans.

Cost Avoidance

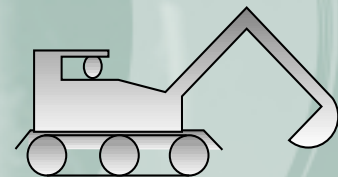
The conceptual cap design included placement of a traditional clay cap. However, the cost to truck in clay to NAS Chase Field would have been high. The alternative use of geosynthetic clay liner material was proposed and eventually approved, yielding savings of \$1.5 million over the estimated cost of a traditional clay cap.



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Landfarming

Landfarming on a former runway was implemented instead of offsite disposal to remediate the POL-contaminated soil. Landfarming makes use of bioremediation (decomposition) to safely break down soil contaminants, and yielded savings of \$270,000 over offsite disposal on this project. In addition, the use of landfarming eliminated a potential long-term liability.

Other Successes

Preparation, cap construction, and seeding of the 35 acres of landfill cover were completed in three months. During construction, daily placement rates of 90,000 to 100,000 square feet of geosynthetic clay liner material were achieved, more than double typical placement rates.

Mission Accomplished

By 1997, the remaining property at NAS Chase Field was eligible to be transferred except for two solid waste landfill sites. The Navy transferred the eligible property to the Texas Department of Corrections (DOC) in 1994. Environmental regulations in the region generally require groundwater monitoring at landfills for five years following closure, but the Navy was able to obtain final closure after two years of monitoring based on a statistical comparison of pre-closure versus post-closure groundwater data. Following approval of the Finding of Suitability for Transfer (FOST) for the landfill sites, EPA deemed all remaining property associated with NAS Chase Field suitable for transfer in September of 1999. The Navy will continue to perform post-closure care of the landfill sites as necessary.

Remediation activities included the following:

- Design and installation of a 26-acre and a 9-acre landfill cap
- Closure of six underground storage tank (UST) sites and pipelines, formerly containing waste oil, aviation gas, and jet fuel
- Closure of two petroleum-contaminated Fire Fighting Training Areas (FFTAs)
- Landfarming about 20,000 cubic yards of excavated soils from UST and FFTA sites
- Testing and disposal of eight polychlorobiphenyl (PCB) transformers
- Asbestos abatement on all buildings as necessary



Landfarming



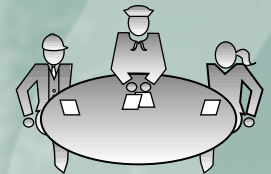
Overview of landfill cap



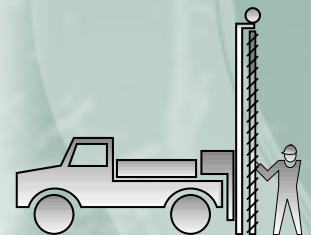
BRAC Success: Cleanup Complete!

Team Commitment Leads to Early Transfer FISC Oakland, EFA West

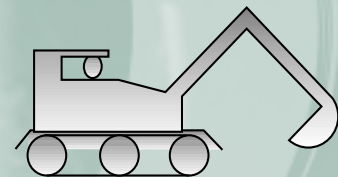
In a first-ever milestone for the Navy's Installation Restoration Program, the full 530 acres of Fleet Industrial Supply Center (FISC) in Oakland, California was transferred to the Port of Oakland in June of 1999—three years earlier than planned. FISC was scheduled for cleanup and transfer by 2002, but superb cooperation among stakeholders permitted the Navy to complete the transfer in record time. "This is unprecedented," said Luciano Ocampo, Remedial Project Manager for EFA West. "It is the first time the Navy has been able to complete a project of this scale in a reduced timeframe."



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Port of Oakland, historic photo



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FISC Oakland redevelopment area



Cleanup in progress

Vision 2000

The community surrounding the Port of Oakland had crafted an industrial redevelopment objective entitled “Vision 2000,” designed to create 10,000 new jobs and make the Port of Oakland more competitive with major Pacific Rim ports such as Long Beach and Seattle. The plan involved expanding and redesigning the port to accommodate increased seaport activity, and rapid access to the FISC property was a crucial piece of that plan. Delays could have jeopardized federal funding for the project.

“In order to meet the Vision 2000 schedule, the community needed immediate access to portions of the property,” Ocampo said. “We worked hard to meet their deadline.”

The FISC Oakland team streamlined the cleanup and approval process with the following strategy:

- Team presented sound technical evidence and obtained approval for “no further action” decisions on 16 out of 25 cleanup sites
- For the remaining ten sites, team focused on site data relevant only to the use planned (industrial)
- Contaminants were immediately removed during investigations or through extensive removal actions
- Sampling was conducted to confirm that contaminants were successfully removed



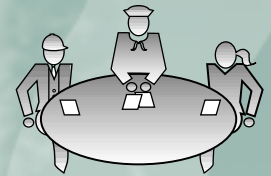
Teamwork in Action

EFA West, port officials, regulatory officials, and EFA West's CLEAN contractor agreed to an aggressive schedule to facilitate immediate short-term leasing and redevelopment of the property. "Cooperation among local, state, federal and military agencies was unparalleled," said the Port of Oakland president.

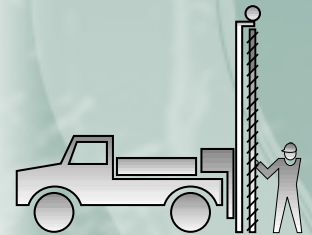
The team also established an efficient review and commentary process, allowing decisions to be made during technical meetings in lieu of a comments period. These forward-thinking approaches by the FISC Oakland team saved the Navy an estimated \$27.5 million by avoiding the need for full-blown remediation design, construction and long-term management of many sites.

Mission Accomplished

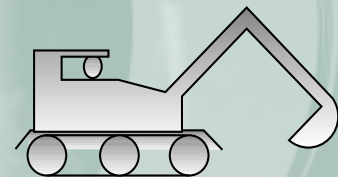
Cleanup and transfer of the FISC property has enabled the Port of Oakland to pursue its goal of economic growth. Vision 2000 will mean new jobs, increased revenue, and the quality of life benefits of a new shoreline park with recreational opportunities for the community.



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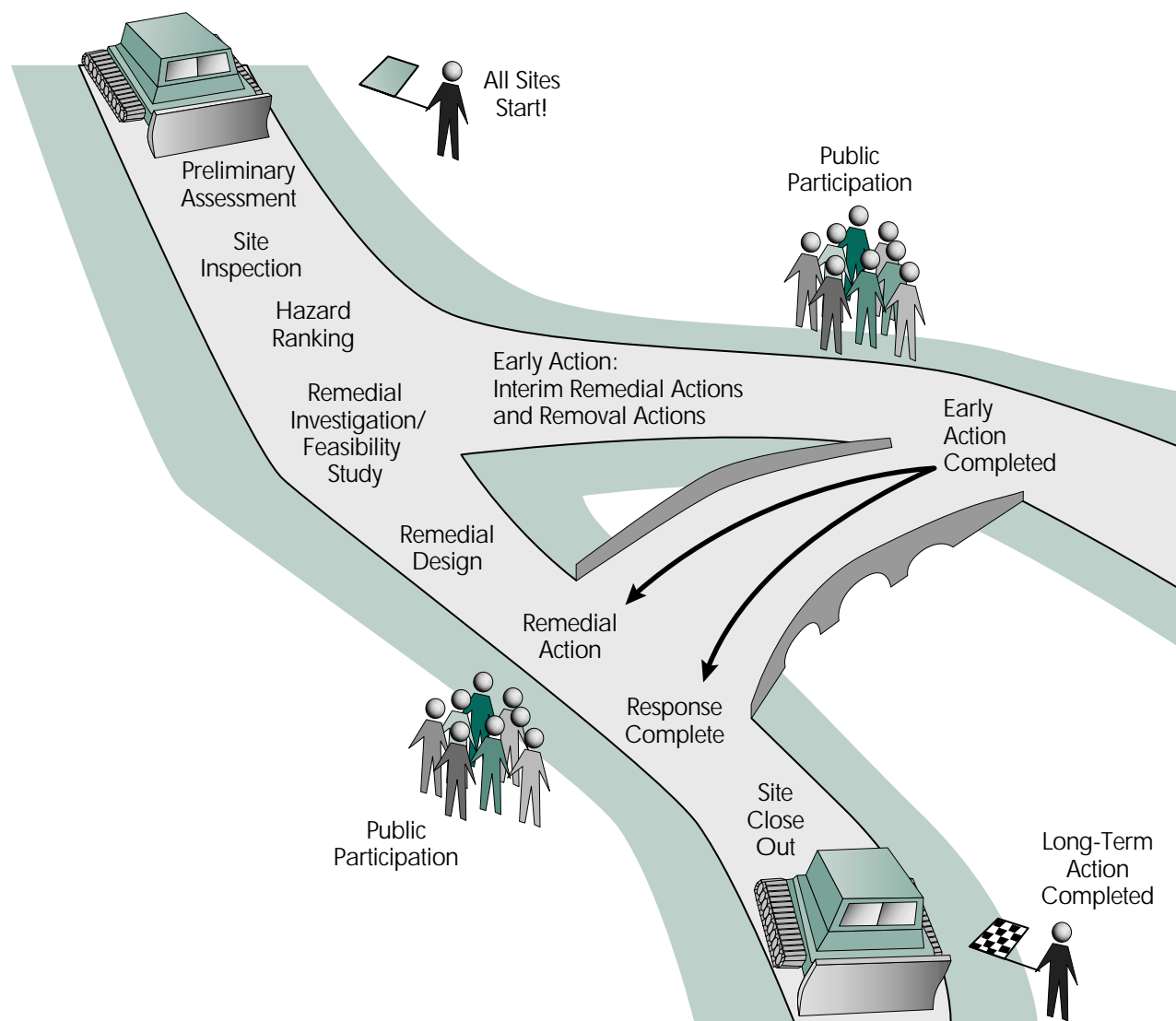
The Navy's Restoration Process

Step One: Identify the Sites

The process usually begins with a preliminary assessment by the Naval Facilities Engineering Command (NAVFAC) that identifies potentially contaminated sites at Navy/Marine Corps bases. Information on operations and disposal practices is reviewed to determine whether those sites may require cleanup.

Step Two: Inspect the Sites

Once a site is identified as potentially contaminated, a Site Inspection is conducted. If necessary, additional sampling of field data is taken to determine whether further action or study is needed. EPA then uses the preliminary assessment and site inspection data as part of a Hazard Ranking System. Sites that rank above a certain threshold are placed on the National Priorities List (NPL), a compilation of nationwide sites that pose the greatest threat to human health and the environment. If a Navy/Marine Corps site is placed on the NPL, the DON enters into a Federal Facilities Agreement with EPA in accordance with Department of Defense (DoD) policy. This agreement specifies the roles and responsibilities of the regulatory agencies and the Navy/Marine Corps, as well as setting the scheduled milestones for cleanup. Even if an installation is not placed on the NPL, DON still carries out the restoration process as part of our cleanup commitment.





Step Three: Remedial Investigation, Feasibility Study, and Remedy Selection

If the site inspection is inclusive, or verifies that the site poses a risk to humans or the environment, the DON proceeds to the Remedial Investigation/Feasibility Study phase. Here the specific nature and extent of threat posed by a release is determined, and possible remedies are evaluated. The remedial investigation itself is a detailed study involving diverse sampling and analysis tasks. Soil, water, sediment and other samples are collected to determine contaminant characteristics, hazards, and routes of exposure. The feasibility study uses that information to identify potential cleanup actions. Alternatives are developed and evaluated, and comments from the public and regulatory agencies are considered. Step three concludes with a selection of a remedy or a recommendation for no further action.

Interim Remedial Actions and Removal Actions (IRAs/RAs) can be done at any time during site investigation or cleanup for any of the following purposes:

- To remedy a release that could present an imminent, substantial threat to human health or the environment
- As a measure to reduce a site's overall risk
- To stabilize a site until cleanup can be finished

DON frequently uses interim remediation to respond quickly to site contamination, reduce study costs, and complete cleanup more rapidly. If a site is identified for cleanup, the next requirement is Remedial Design, which involves preparing the technical drawings and specifications for the chosen action. The remedial design provides the blueprint for Step 4.

Step Four: Remedial Design/Action

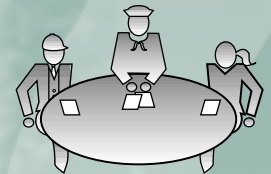
This is the actual cleanup step, where a variety of treatment tools are used to restore a site. Because of the Navy's commitment to getting the job done, approximately 60 percent of our Environmental Restoration, Navy funds are spent on cleanup each year.

Step Five: Response Complete

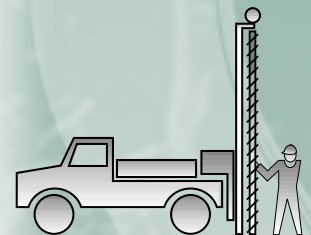
As each cleanup effort concludes, two critical milestones are targeted:

- **Remedy in Place (RIP):** The long-term cleanup/treatment system is constructed and is operating as planned
- **Response Complete (RC):** Based on the DON's stringent standards, the cleanup work is complete.

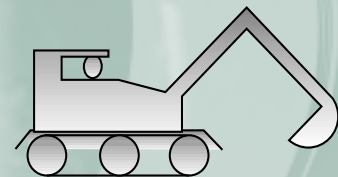
Finally, when no further actions are needed because a site poses no threat to human health or the environment, and when regulator consent is received if required, the site is considered "Site Closed Out." At National Priority List (NPL) sites, the Environmental Protection Agency (EPA) must concur with the Navy's decision. A site may be closed out at any time during the assessment or cleanup phase when sufficient information has been gathered to support that decision.



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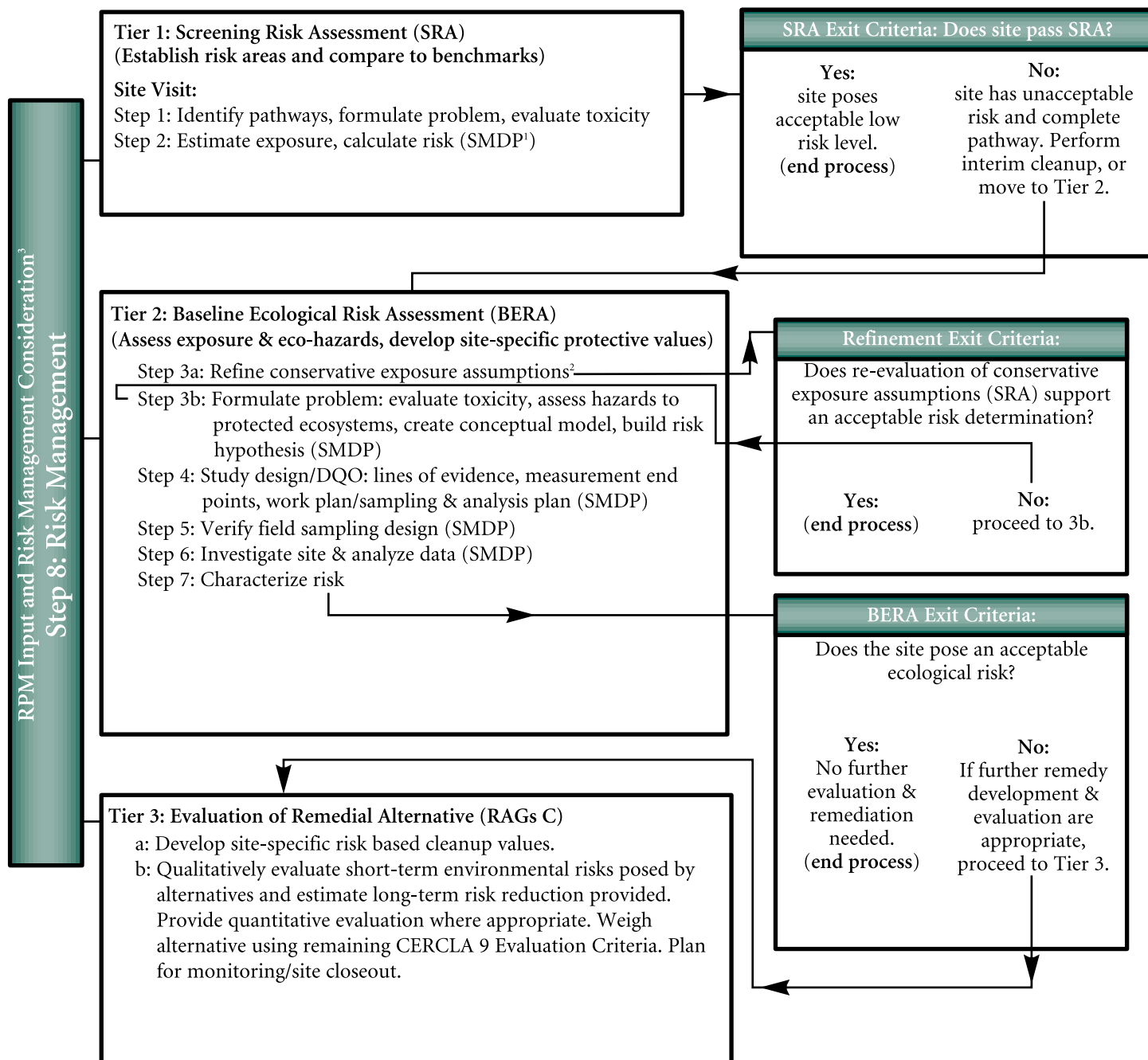
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The Navy's Ecological Risk Assessment Tiered Approach

(Chart is modified. See 5 April 1999 CNO Ecological Risk Assessment Policy for greater detail)



¹ See EPA's 8 Step ERA Process for Scientific Management Decision Points (SMDP) requirements.

² Refinement includes but is not limited to background, bioavailability, detection frequency, etc.

³ Risk Management is incorporated throughout the tiered approach.



SMART Policies

Ecological Risk Assessment Policy

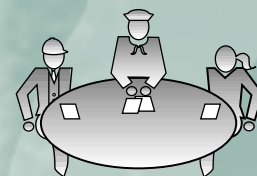
As part of its commitment to protecting the environment, the Navy has developed a policy to ensure that Ecological Risk Assessments (ERAs) are conducted in a scientific, defensible, and cost-effective manner while protecting human health and the environment to the fullest extent possible.

The Navy policy for conducting ERAs identifies a three-tiered approach that emphasizes interaction and concurrence within the Navy project team (Remedial Project Managers (RPMs); Remedial Technical Managers (RTMs); regulators and contractors) and identifies specific decision points and criteria for exiting or proceeding with the risk assessment process. The tiers include Tier 1, Screening Risk Assessment; Tier 2, Baseline Ecological Risk Assessment; and Tier 3, Evaluation of Remedial Alternatives. See previous page (2-12) for diagram. This approach focuses the assessment activities on important risk issues, enhances communication and identifies clear points for making management decisions, thereby expediting the risk assessment process and allowing the DON to make intelligent cleanup decisions.

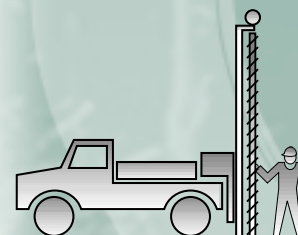
Land Use Controls Policy

The Navy has written an interim policy for Land Use Controls (LUCs) in order to establish consistent procedures for managing restricted-use cleanup sites in a safe and environmentally friendly manner.

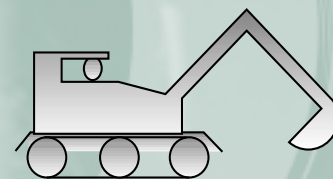
LUCs are measures designed to enclose and limit access to cleanup sites that have been designated for restricted use. These measures include two types: engineering controls (ECs), which include chemical containment systems, cleaning systems, and physical barriers (landfill caps, fences); and institutional controls (ICs), which are legal, reporting, and/or regulatory devices designed to ensure that ECs stay in place. Based on the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the key regulation cited by EPA is the National Contingency Plan (NCP), which includes a series of standards that agencies must use in choosing remedies for restoration sites. In those standards, LUCs are cited as the remedy of choice for certain sites—particularly sites with low long-term risk to human health and the environment and sites in which full treatment is unattainable. When LUCs are selected as the best remedy, it is often possible to transfer properties for restricted use more rapidly than full closeout sites. The Navy's LUC policy provides direction on evaluating risks and choosing appropriate ECs and ICs that protect human health and ecosystems to the fullest possible extent. This benefits the public by making the land available for designated purposes within a shorter timeframe while maintaining a maximum level of protection and safety.



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SMART Programs and Organizations

Navy Environmental Leadership Program

The Navy Environmental Leadership Program (NELP), located at Naval Station Mayport, Florida and Naval Air Station North Island, California, is instrumental in developing and demonstrating cost-effective, innovative environmental technologies and management tools that can be adopted by Defense Department installations. NELP was established to find new ways to manage Navy and Marine Corps environmental programs. For cleanup, this means getting the job done better, faster and cheaper.



Want More Information?

Visit the NELP website at www.nelp.navy.mil

Naval Facilities Engineering Service Center

The Naval Facilities Engineering Service Center (NFESC), located at Port Hueneme, California, provides the Navy with specialized engineering, scientific and technical products and services. NFESC focuses on the transfer of technology through engineering, design, construction, consultation, testing and evaluation, technology implementation and management support. NFESC employs existing technologies where possible, identifies and adapts breakthrough technologies when appropriate, and performs research and development when required to meet Navy and Marine Corps needs. For the cleanup program, NFESC seeks new methods and technologies to mitigate environmental impacts from current and past DON operations.



Want More Information?

Visit the NFESC website at www.nfesc.navy.mil

Defense and State Memorandum of Agreement

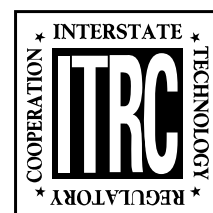
The Defense and State Memorandum of Agreement (DSMOA) fosters partnerships with states and territories, providing a standardized means of reimbursement for the oversight services states provide in support of investigation and cleanup efforts at active and closing installations. DSMOA represents the commitment between DoD and a state, and funding is provided through a Cooperative Agreement (CA) that establishes a specific two-year plan for cleanup in the designated state and activity projections for the next four years.

Want More Information?

Visit the DSMOA website at <http://hq.environmental.usace.army.mil/programs/dsmoa/dsmoa.html>

Interstate Technology and Regulatory Cooperation

The Department of Navy Environmental Restoration Program is working with the Interstate Technology and Regulatory Cooperation (ITRC) to help expedite and foster regulatory acceptance of innovative technologies to remediate sites. ITRC was created through the Western Governors Associated and is comprised of more than 25 states, three federal partners, stakeholders and two state associates. ITRC provides forums for regulators and stakeholders to exchange information to build their knowledge of innovative technologies. This allows regulators and others stakeholders to increase their comfort level when excepting new technologies. ITRC also develops innovative technology guidance documents to aid in the understanding of the technologies. DON is excited in working with ITRC to tackle the challenges and barriers of implementing new innovative technologies.



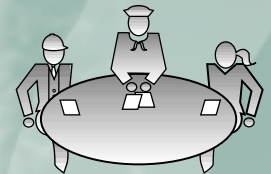
Want More Information?

Visit the ITRC website at <http://www.itrcweb.org/>

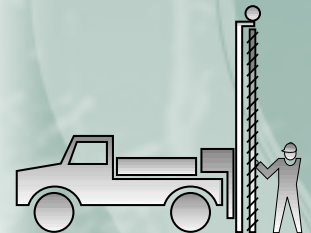


Cleanup Review Tiger Team

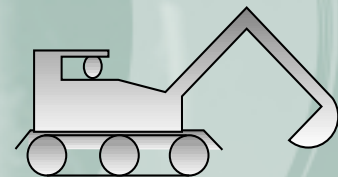
The Navy uses various types of experts to review existing documentation at a site to determine impediments in the Installation Restoration (IR) program and to find cost saving measures. The Navy refers to these groups as the Tiger Teams, the first of which was developed in 1996. Since that time several Tiger Teams have been developed to review special cases at different installations. The Tiger Teams help to focus attention on the greatest opportunities for cost control. Conventional wisdom has looked at cost savings alternatives during remedy selection; for example, choosing whether to use innovative technologies in place of more conventional cleanup solutions. The Tiger Teams found that the opportunity for cost avoidance is far larger in the earliest phases of investigation, where geostatistics, sampling plans, data quality objectives, exposure values, land use assumptions, health risk assessments and ecological risk assessments can drive cleanup standards. These factors determine the level of cleanup required and the cleanup remedies that can meet those needs.



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Alternative Restoration Technology Team

The Navy chartered the Alternative Restoration Technology Team (ARTT) in 1996 as an advisory group to Installation Restoration (IR) managers. The group is comprised of representatives from the Chief of Naval Operations, NAVFAC, Marine Corps, Engineering Field Divisions and Activities (EFD/As) and NFESC. ARTT promotes the use of innovative technologies to save time and money, and is responsible for the following activities:

- Identifying barriers to implementing innovative technologies and methods
- Recommending process changes to eliminate or minimize the impact of barriers to implementing technologies
- Proposing policies and procedures for developing and implementing new technologies and methods
- Developing and recommending initiatives that will support the use of innovative technologies and methods
- Identifying potential sites and innovative technologies for demonstration projects



Through these efforts, ARTT has enhanced the cleanup program by providing the Navy with a centralized, focused and efficient approach to information and technology transfer.

Want More Information?

Visit the ARTT website at

http://erb.nfesc.navy.mil/support/work_grp/artt/main.html



Future Generations

SPAWAR Systems Center Environmental Sciences Division

The Environmental Services Division at the Space and Naval Warfare (SPAWAR) Systems Center is a leader in marine environmental quality assessment, sensor development and remediation. The division draws on a broad range of in-house expertise and partnerships with industry, academic institutions, and government organizations to research, develop, test and evaluate technology to support the DON's environmental mission. The division is located at Point Loma, San Diego, CA within the Ocean Sciences Laboratory, providing convenient access to modern chemistry, biology, measurement technology, computer and electronics resources. Within the Environmental Sciences Division the Marine Environmental Support Office (MESO) provides technical assistance to Engineering Field Divisions and Activities (EFD/As), shipyards, and federal agencies. In addition, MESO serves as an interface between those groups and regulators, academic institutions, research and development teams, and the public.



Through the Marine Environmental Quality program (MEQ), the division uses a multidisciplinary team approach to create innovative solutions to challenging assessment and remediation issues in the Navy's compliance and cleanup pillars. Engineers and scientists at SPAWAR are developing test and monitoring equipment that will enable the Navy to rapidly assess the composition and toxicity of materials released by ships and shore operations. Partnerships with nearby naval facilities, academic institutions make leading edge marine research possible through access to mechanical and electrical engineering facilities, machine shops, surface and undersea research vessels, supercomputers, and image and signal processing equipment. SPAWAR is also working with the Environmental Protection Agency (EPA) and the NAVFAC Ecological Risk Technical Assistance Team (ERTAT) to create better methods of risk assessment.

Want More Information?

Visit the SPAWAR website at <http://agena.spawar.navy.mil/>

Ecological Risk Technical Assistance Team

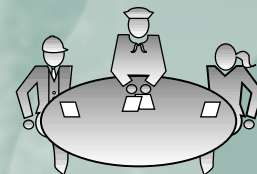
The National Contingency Plan (NCP) requires that a baseline risk assessment be conducted for human health and the environment at each Installation Restoration (IR) site as part of the Comprehensive Environmental Response, Compensation and Reliability Act (CERCLA). The Ecological Risk Technical Assistance Team (ERTAT) works to ensure that the DON conducts consistent, technically sound, and cost-effective ecological risk for IR sites. Established by Naval Facilities Engineering Command (NAVFAC), ERTAT is coordinated by NFESC and consists of representatives from the Environmental Protection Agency's Environmental Response Team (ERT) and the Space and Naval Warfare Center (SPAWAR). In the field, ERTAT offers technical assistance to Remedial Project Managers (RPMs) at the Engineering Field Divisions/Activities (EFD/As) to make certain that site closures meet EPA guidelines and are fully protective of the environment. The ERTAT supports the EFD/As by working directly with managers, RPMs, RTMS contractors and regulators; reviewing ERA reports and work plans; providing technical assistance at regulatory meetings; expediting training and technology transfer through the Civil Engineer Corps Officer Training School (CECOS) and Remedial Innovative Technology Seminars (RITS); providing access to ERA-related analysis expertise; and elevating guidance needs to NAVFAC. Guidance from the Assistant Secretary of the Navy (ASN), and the Chief of Naval Operations for designing and conducting ecological risk assessments are used as the foundation of the ERTAT effort.



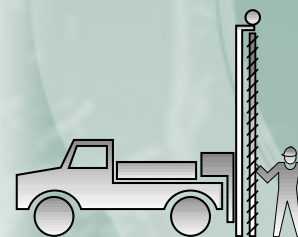
SMART Workgroups

Ecological Risk Assessment Workgroup

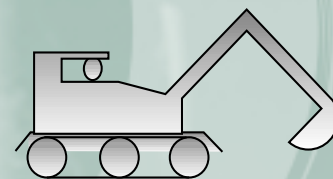
Strategies for addressing ecological concerns have been a passionate topic for the Navy. The Ecological Risk Assessment (ERA) Workgroup was developed to foster open dialogue between ecological experts at each of the Engineering Field Divisions (EFDs) and Engineering Field Activities (EFAs), NAVFAC, CNO, NFESC, and SPAWAR. The ERA Workgroup conducts ecological forums to encourage communication among these groups about stumbling blocks they have encountered or overcome. During the Ecological Forum, EFD/EFA/NFESC representatives present projects from their installations, CNO/NAVFAC personnel talk about new policy issues, contractors present innovative approaches to addressing risk, and other governmental agencies explain their role in the ecological risk arena. The ERA Workgroup provides positive feedback to the policy makers as well as helping to develop ERA Guidance Documents.



Site Planning



Investigation



Cleanup



Site Closeout

Long Term Management/Remedial Action Operation Workgroup

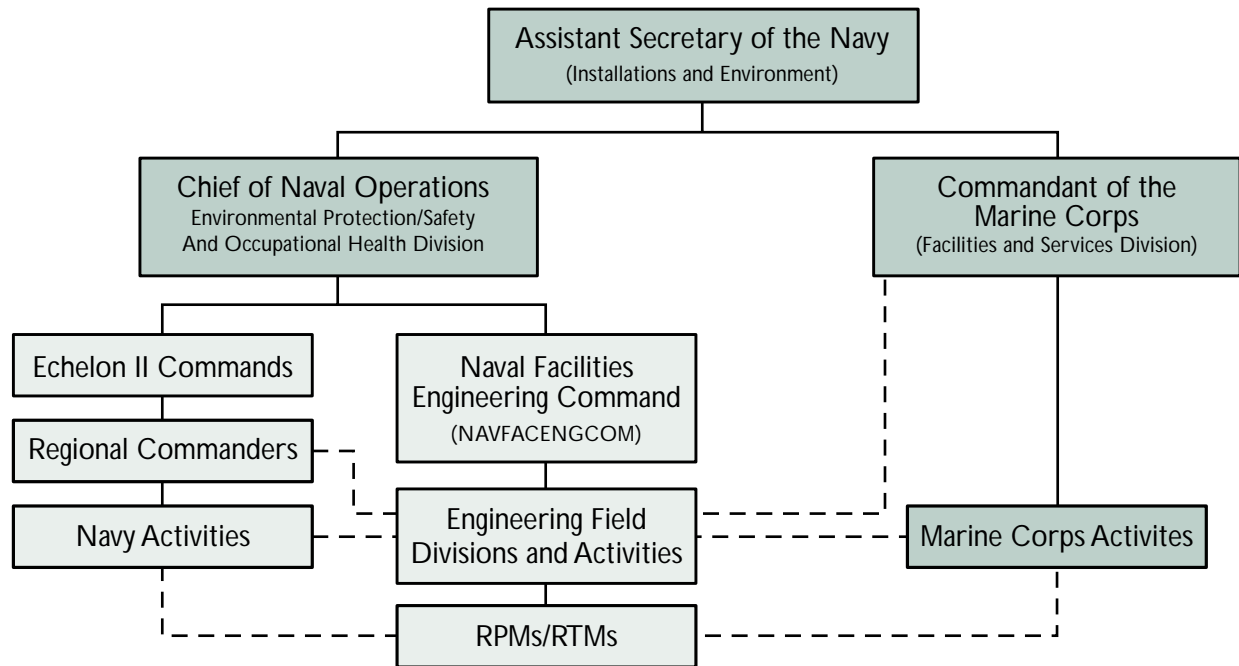
Remedial Action Operations (RAOs) are the steps taken during the cleanup phase of an Installation Restoration site—in other words, the “remedy in place” that will eventually correct a particular site’s environmental issues. Once the RAO is complete, the DON generally performs Long Term Management (LTM) of the site to make sure the remedy is still effective and the site remains safe for its intended purpose. The LTM/RAO Working Group is a planning committee organized by the Naval Facilities Engineering Service Center (NFESC) to develop guidelines for optimizing LTM/RAO efforts at DON sites using a life cycle design approach, particularly those sites that lack a monitoring process. The group includes representatives from the Chief of Naval Operations (CNO), the Naval Facilities Engineering Command (NAVFAC), the Engineering Field Divisions/Activities (EFD/As) and the NFESC. The group is currently developing guidance documentation for both LTM and RAO; establishing guidelines for an acquisition strategy; working with DoD and other agencies who are dealing with similar issues; promoting technology transfer opportunities for Remedial Project Managers (RPMs) through seminars and training, and coordinating with regulatory agencies for regional and national acceptance of the optimization procedures.



Future Generations

Navy Organization Charts

Department of the Navy



NAVFACENGCOM Cleanup Roles

- Environmental Support & Project Execution
- Base Realignment & Closure
- Contracting
- Design and Construction

Engineering Field Divisions and Activities

